

ABSTRACT OF THE DISCLOSURE

The interferometer has a diffraction grating 21, a condenser lens 22, a transparent substrate 23, a field lens 24 and an imaging device 25 arranged in this order. The transparent substrate 23 is arranged at the position in the optical axis direction where both focal spots of a zeroth-order diffracted light L21 and a first-order diffracted light L22 are formed. Formed on the transparent substrate 23 is a circular opaque zone 23a whose central position is the central position of the focal spot of the first-order diffracted light L22. Formed at the center of the opaque zone 23a is a pinhole 23b whose central position is the central position of the focal spot of the first-order diffracted light L22. The contrast of the interference fringes observed on the image device 25 is enhanced by the optical interference between the first-order diffracted light L22 passing through the pinhole 23b and the zeroth-order diffracted light L21 passing through the transparent substrate 23.